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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XXVI MARCH, 1956 No. 3

POLIO VACCINATION NOW TO PROTECT SCHOOL CHILDREN NEXT SUMMER

HART E. VAN RIPER, M.D.

Medical Director of The National Foundation for Infantile Paralysis

The Salk vaccine in 1955 cut paralytic polio by at least 76 per cent in vaccinated children, as compared with those who received no vaccine. Some 1,200 to 1,300 youngsters were spared from the disabling disease!

This is good news, but 1956 can bring even better results. Vaccine supplies should be sufficient for *all* children in the susceptible age groups for whom it is requested. Many thousands can be protected if parents will act *at once*.

The time element is important. Children must receive their first two vaccine shots *before* the coming epidemic season. It will take many weeks to complete these inoculations. Therefore, vaccinations nation-wide must be stepped up *immediately*.

The National Foundation for Infantile Paralysis, although no longer distributing vaccine, is concerned that every parent understand the necessity for vaccinations *now*. Some 35,000,000 informational pamphlets for parents will be distributed through the schools. Through a national public education campaign, every effort will be made to get polio vaccinations into high gear.

At the same time, teachers can render a valuable service by interpreting the need to both parents and children. Here are the facts to guide you:

1. *The vaccine is safe.* Since revised federal safety standards were adopted in May 1955, some 10,000,000 children have received vaccine with a perfect safety record.
2. *The vaccine is effective in preventing paralytic polio.* This was proved in the 1954 field trial, and again in 1955, when first and second grade school children were vaccinated.
3. *Young children must have priority* as long as supplies are limited. Age limits vary from place to place, but usually children from about one to 14 years are receiving vaccine first. More than two-thirds of paralytic polio occurs in this age group each year. It is believed that two doses

should be available before the polio epidemic period for every infant and child through age 14 whom the vaccine is requested.

4. *Parents should secure vaccine through their doctors,* or their children may be eligible for vaccine procured by public health authorities. The federal government has set aside funds to purchase vaccine for distribution to the states. Plans for use of this vaccine vary from place to place. Doctors or health officers can advise parents how the vaccine is being used in a town or county.
5. *Three shots of vaccine are necessary for long-lasting protection.* The first shot should be given *now* and the second, two to four weeks later. The third shot is due about seven months to a year after the second. Vaccine supplies must be used first to meet the demand for first and second shots.

As teachers, in constant association with children, you are anxious to see the threat of polio wiped out. Certainly the vaccine must be used far more widely before polio really is overcome. You have always helped fight this disease, and you will again — to see that vaccinations proceed as rapidly as possible.

* * * * *

OREGON GETS FIRST MEMBER ON U.N.E.S.C.O. GROUP

Oregon has its first member on the national commission for the United Nations educational, scientific and cultural organization, and she is Mrs. Jennelle Moorhead of Eugene.

The prominent Oregon educator and civic worker is one of 15 "private citizen" members of the commission, which has a total of 100 members. Other members are drawn from the federal, state and local governments.

Mrs. Moorhead is an associate professor of health education and, while she has faculty status at the University of Oregon, she works through the extension division. Her work, principally with teachers, keeps her on the move throughout the state.

She was president of the Oregon Congress of Parents and Teachers from 1950 to 1953, and for three years before that she was vice president of the organization. She has been Northwest vice president of health education for the American Association for Health, Physical Education and Recreation, and secretary-treasurer of the State Presidents club of the National Congress of Parents and Teachers.

Mrs. Moorhead has served on various committees of the American Health and American Public Health associations. She is

(Concluded on Page 106)

THE FAMILIAR SOUNDS TEST AND OTHER TECHNIQUES FOR SCREENING HEARING

MARION P. DOWNS, M.A.

Supervisor of the Hearing Center, Hearing and Adult Speech Center, University of Denver, Denver, Colorado.

The detection of hearing loss in children is being recognized as a paramount challenge to workers in education and research alike. Interest has been spurred by the knowledge that 5% of our child population can be expected to have hearing problems, as stated by Dr. Warren Gardner in his American Hearing Society report.[5] At this point of time, two questions are uppermost in the minds of those concerned with this problem: First, what are the most effective methods and principles to follow in a Hearing Conservation Program? And second, how young a child can be successfully tested in such a program? The answers to these questions can be found by surveying the present knowledge in the field, and by reviewing a new type of testing procedure which is successful with children as young as three years.

Evaluation of Principles and Methods of Screening Children: In conducting a hearing conservation program, certain principles must be kept in mind constantly, lest the true goals of hearing conservation be obscured. Three facets of an acceptable hearing screening program are inseparable:

First, a testing procedure which aims to find, within the limitations of human error, *all* those children with a hearing loss. Such a testing procedure includes not only the initial screening test, but also threshold audiograms by a competent audiometrist on all failures, to verify the results.

Second, a medical follow-up program which aims to place under proper medical care every child with a hearing loss. In the Will County, Illinois, Survey of 1947, which serves as a model for all hearing surveys, 87% of the children who failed the test were adjudged by the University of Illinois physicians to require the care of otolaryngologists. [19]

Third, an educational follow-up program which provides the specific educational rehabilitation measures required for each child. The criteria for referrals for such rehabilitation measures are carefully set forth in the A.M.A. Manual for a School Hearing

Presented before the School Health Services Section of the American School Health Association, November 16, 1955.

Conservation Program.[12] The Manual establishes referrals as follows: 1. For speech training—those speech defects due to the hearing loss; 2. For lip reading—those children with 25 decibels (db.) or more average loss at the frequencies 500-2000 cycles per second (cps), if the hearing loss does not yield to medical care within six months; 3. For hearing aids—those children whose average loss at 500-2000 cps. is 30 db. or over, providing medical treatment does not improve the condition. (Recently, the trend has been to reduce the criterion for hearing aid referrals to the 25 db. average in the case of young children, as suggested by Dr. H. C. Huizing of Holland.[9] Clinical experience supports the 25 db. level as a very realistic point, for the young child has greater need to make fine hearing discriminations in his early school years than later on.)[4] For special schools or class—those who continue to fail in school despite rehabilitative measures.

To repeat, these three aspects — a reliable testing technique, adequate otologic follow-up, and proper educational referral — must all be accomplished or the hearing conservation program becomes meaningless. Concerning the use of reliable screening techniques, this statement can be made: The necessary techniques for screening the hearing of children are known and available. It remains only for zealous community leadership to implement the programs effectively, and to provide proper otologic and educational follow-up. The following survey of screening techniques substantiates this statement.

The first hearing screening technique to be used was the old Western Electric group phonograph audiometer [16], which so effectively pioneered the hearing conservation program in this country. It has long since been evaluated as an inefficient screening device, due to its inability to diagnose specific high tone hearing losses[11]. In its place are found a number of well-validated and efficient screening devices which offer to communities a wide range of choice to suit every need. In addition to a new type of screening test which will be described later, four excellent screening procedures are available to the organization conducting a hearing conservation program:

1. *The Individual Pure Tone Sweep Test.* This test employs an audiometer with air conduction ear phones, with which one individual is given a sweep check at a minimum of four frequencies. The screening intensity used is customarily 15 db. when a quiet room is used; 20 db. when the

noise level is high.[12] Failure at two frequencies is considered significant. The frequencies 250 through 8000 cps. can be checked, but sufficiently adequate diagnosis can be secured through checking only 500, 1000, 3000, and 6000 cps. An average of 30 individuals per hour can be screened this way. The test has been found effective in the Denver Public Schools for as low as the kindergarten level. In surveys using this technique, 5 to 7% of the children can be expected to fail the tests.[5]

This continues to be the chosen technique in many situations, and presents the greatest reliability in case finding. Although in many instances more elaborate equipment may be desirable, a pure tone audiometer will fill the needs of both the screening program and the follow-up threshold tests. The individaul sweep test is inefficient in point of time involved, and may not be economical in a very large school system unless sufficient personnel can be provided to conduct the tests.

2. *The Glorig Automatic Group Screening Audiometer.* Adopted for use in the Armed Services, this device automatically screens up to 40 individuals in 3 minutes by means of a pulse-count technique.[6] The instrument presents a varied number of pulse tones at each frequency, first to one ear and then to the other. The testee records the number of pulses heard at each frequency, thereby providing test results on both ears simultaneously. The instrument has a panel of lights which mobilize the attention of the test group, as well as a recorded voice which says "Listen and count."

   For a large population, this automatic audiometer offers the most efficient group screening technique available. In actual tests it has both screened and re-checked 100 children per hour. No trained personnel are required, as the test administers itself. In its present form, it is effective down to the third grade level, but adaptions to the lower grades remain to be explored. For smaller school populations of under 1000 this equipment may not be economical, but in populations where time is a major consideration it offers a fast and highly accurate method of screening.

3. *The Massachusetts Group Screening Test. Dr. P.* W. Johnston of Massachusetts devised this method of group screening, utilizing the banks of headphones from the old West-

ern Electric 4C Audiometers, in conjunction with a pure tone audiometer.[10] Any other adequate banks of headphones can also be used, connected to the pure tone instrument. Because the addition of multiple headphones reduces the output of the audiometer, it must be carefully re-calibrated according to specified procedure, and corrections made. A sequence of bursts of tones is given with six options of Yes or No at each frequency. The testees then record their responses on a form. With 40 headphones in use, as many as 150 children can be tested and graded in one hour. In a study on the efficiency of this test, Dr. Kenneth O. Johnson and Dr. Hayes A. Newby found that it provides accurate screening in grade three and upward, but that in kindergarten through second grade it does not produce acceptable efficiency, even with adaptions.[11]

The Massachusetts test is particularly economical for school systems which possess the now obsolete Western Electric phonograph equipment. For large school systems it offers an extremely fast and sufficiently reliable technique for grades down to the third.

4. *The Reger-Newby Group Screening Audiometer.* This method employs an automatic audiometer which produces spurts of tone in varying numbers at each frequency. The spurts are counted and recorded by the testees on a form.[18] A flashing light on the instrument mobilizes the attention of the group at the time the pulse tones are to come through. No trained operator is necessary, as once the starting point has been dialed, the instrument goes through the programming automatically. Forty children can be screened simultaneously.[14] Using this technique, the Will County, Illinois, Survey found 7.5% of the school population to have hearing losses.

   A study of the efficiency of this test by Dr. Hayes Newby showed that it is sufficiently accurate to provide an acceptable screen of children in the third to twelfth grades.[14] For the larger school system it may be economical, especially in terms of personnel.

From this brief survey of presently available screening tests, it can be seen that the upper grade levels are indeed well provided for. From kindergarten through the second grade, however, the individual sweep check remains the only accurate pure tone tech-

nique. Until the past year, the child under school age has had no participation in mass screening efforts, regardless of techniques. And the pre-school child has no less need of hearing conservation than the school child. In fact, his need is greater, because of the importance of the child of having full use of his hearing in the years from two to five, which is the formative period of his speech and language development. It is also vitally important for him to have early medical treatment for a hearing loss before it becomes irreversible.

Many clinical services offer hearing tests for the very young child, but few attempts have been made to screen large numbers of young children. This is due primarily to uncertainty as to the validity of the techniques available for young children, as well as to the difficulty of administering the standard tests to young children. In 1954, Dr. William E. Mosher reported the screening of 826 children between the ages of two to five, in the Buffalo preschool program, using the standard individual pure tone sweep test.[13] One hundred and four of these children were in the age group two to four. What were considered to be successful tests were obtained on 97% of the five year olds and 94% of the four years olds, but only 77% of the three year olds, and 58% of the two year olds. Dr. Mosher's report pointed up the need for improved techniques for the younger groups, and stimulated interest in further research.

In the spring of 1955, Dr. Leland Corliss and Dr. Mildred Doster of the Denver Public School Health Department presented to the University of Denver Hearing Center the problem of determining, first, whether the three to five year olds in their preschool program could be rapidly and accurately screened with standard pure tone techniques; and second, whether any other technique could be developed which would better accomplish the purpose. A pilot study was undertaken as a result of this proposal, and a new technique was developed which proved to be far more accurate and easy to administer than the standard pure tone method.

Pilot Study on a Familiar Sounds Screening Test. The study conducted by the University of Denver Hearing Center was limited to the 349 children in the pre-school program of the Public Schools who were three years old and not yet four at the time of the test. To carry out the project, the support of several organizations was enlisted. The Junior League of Denver provided volunteers who supervised the mass screening and conducted the parent inter-

views. In addition, the Junior League provided the funds for the materials and for the technician who conducted the tests. The Colorado Otolaryngological Society provided a committee to supervise the medical aspects of the study, and the Denver Hearing Society furnished its equipment and sound room as the testing locale. The number of organizations contributing to the project attests to the city-wide interest in promoting the welfare of these young children.

In addition to the standard pure tone sweep test, an entirely new type of screening test was selected for validation on this group. The test was based on one conceived originally by Dr. Aram Glorig of the American Academy of Ophthalmology and Otolaryngology Committee on Noise in Industry. A series of familiar sounds: A dog's bark, an auto horn, a gun shot, a bird song, a cat meow and a telephone bell, were used. These were recorded after certain of the tones in each sound had ben removed. For example, the dog's bark as recorded contained only the frequencies 1000 to 2000 cps., the frequencies below 1000 cps. and above 2000 cps. having been removed by electronic filtering. Two sounds were recorded at the 250-750 cps. band width, two at the 1000-2000 cps. band, and two at the 3000-5000 cps. band. The recorded disc was put on a Maico H-1 pedestal audiometer and was calibrated on normal ears. Corrections were then made for the audiometric readings.

When the child was tested, a page of pictures representing the sounds he would hear was put before him. As an initial orientation, each sound was first presented to him at a level of 50 db., and he was asked to point to the picture representing the sound. He was then told to listen closely, and one of the sounds at each band width was repeated in each ear at a 15 db. level. If he failed to identify correctly any one of the sounds at this level, he was referred for a pure tone threshold test which was given at a later date.

In addition to the Familiar Sounds Screening Test, each child was also given a pure tone sweep test at 15 db., using the technique of hand-raising when a tone was heard. Those who did not respond at any one of the test frequencies, 500, 1500 or 4000 cps., were later re-tested by threshold audiograms. These three frequencies were used because they coincided with the peaks of the Familiar Sounds Test, and also because more than three test frequencies would tax the attention span of a three year old child. Pure tone threshold tests were also given at the three selected frequencies to

one out of every five children of the entire 349, selected by random numbers. These were given at the time of the screening for use as a control group. Any child who failed in either of the screening tests or in the threshold tests was later retested by detailed threshold audiograms, given four to six weeks after the original tests.

The average time consumed in administering the screening tests was six minutes for the pure tone screen, four minutes for the Familiar Sounds Screen, and fifteen minutes for the random threshold tests. The time for the Familiar Sounds Screen included the initial orientation to all the sounds at a loud level. Experience indicates that if the orientation could have been given in a pre-screening group session the screening time for the Familiar Sounds Test could have been reduced to two minutes. Future programs will adopt this technique.

Of the 349 children who participated, 331, or 95% cooperated well in the tests. This is much higher than the 77% cooperation reported by Dr. Mosher in his three year old group. The excellent response to the screening may be due to the painstaking preparation given by the teachers of the various pre-school groups, and to the instructions for home preparations which were given to the parents.

The follow-up pure tone threshold audiograms four to six weeks later were done by clinicians experienced in children's techniques, who had no previous knowledge of the results of the testing. Complete threshold audiograms were given at all usual frequencies, by air and bone conduction. Preparation was made to utilize any technique necessary to elicit a reliable pure tone audiogram, including the use of psychogalvanic skin response, which fortunately was not needed. A variety of toys was used to induce conditioned play responses to the pure tones in the threshold tests. In most cases more than one toy response was used in order to hold the attention span of the child during the hour's testing. Three techniques were employed: (1) Block-building, with the child adding to a tower of blocks whenever he heard the tone; (2) Model airplanes, with the child "flying the plane" whenever he heard the signal; and (3) Noisemakers, with the child blowing a horn or other noisemaker when the tone was heard. Responses considered to be reliable were obtained on every child retested.

A comparison of the complete results indicates that the Familiar Sounds Screening Test was superior to the pure tone screening tests as applied to young children. A total of twenty-six children, or 7.8% of the 331 tested were found by the pure tone thres-

hold tests to have significant losses of 15 db. or more at one or more frequencies. This percentage compares closely with that found by the screening tests previously mentioned. Of the 26 children with significant losses, 25, or 96% had been detected by the Familiar Sounds Screen Test. Of the same group of 26, only 10, or 38.5%, had been found by the pure tone screen test. Thus, the Familiar Sounds Screen failed to detect only 4% of those with significant hearing losses, as compared to the 61% who were undetected by the pure tone screen. The most important measure of the efficiency of a hearing test is whether it is able to find the greatest percentage of those who have hearing problems. In this respect, the Familiar Sounds Screening Test proved to be a far more accurate instrument.

Another measure of efficiency in a screening test is whether it produces too many unnecessary follow-up re-tests. In this regard the pure tone screen resulted in 8 children, or 2.4% of the 331, being re-tested unnecessarily, as they were found by the threshold audiograms to have normal hearing. The Familiar Sounds Screen failed 12 children, or 3.6% who proved to have normal hearing. Both of these percentages are lower than is usually found in screening test results.[11, 14] Using this measure, not too many unnecessary re-tests were produced by either of the screening tests in this study.

The greater accuracy of the Familiar Sounds Screen Test in correctly classifying the hearing of the three year old age group may be due to the fact that it relies on an identification response rather than on a yes-no response. The three-year-old is eager to please, and may give inaccurate responses to the pure tone screen unless carefully checked. With the Familiar Sounds Test he must choose between six possible responses, thereby making it difficult for him to respond falsely. It is anticipated that this test can also be used for older children and for the lower grades if desired. At a later date, a threshold validation study of October, 1955, will be reported on, showing the test to be an adequate threshold measure as applied to 70 college students with both normal hearing and deafness. The effective use of the test may, however, be limited to the second grade level, and down to the three year age level, as above the second grade the group screening dvices provide faster methods.

The twenty-six children who were found to have significant hearing losses were referred for medical examination, and 20 medical reports have been received to date. In every instant the reports confirmed the presence of ear disease. These medical findings were

taken to corroborate the results of the threshold audiograms. In the interim between the final audiograms and the present, eleven of the twenty-six children with significant losses received medical treatment, and follow-up pure tone threshold audiograms were obtained on this group. Of these, eight showed improved hearing, and three were restored to perfectly normal hearing. The remainder of the children had not yet completed treatment. These will be followed up at a later time.

From these results it is apparent that the University of Denver's Familiar Sounds Screening Test may well fill the need for rapid, efficient techniques for testing the hearing of the younger grade school child and the pre-school child.

SUMMARY

A survey of presently available hearing screening techniques reveals that several excellent methods can be applied to school children: The Individual Pure Tone Sweep Test provides efficient screening for children in kindergarten through third grade. The Glorig Group Audiometer, The Massachusetts Group Screening Test, and the Reger-Newby Group Audiometer, furnish economic and accurate screening techniques for the third through the twelfth grades.

For pre-school children, a new type of test which uses filtered Familiar Sounds was found to be more effective than the Individual Pure Tone Sweep Test. In a pilot study by the University of Denver on 349 three-year-old children in the Denver Public School preschool program, 95% of the children cooperated in a mass screening survey. The new Familiar Sounds Screening Test detected 96% of those with significant hearing loss, whereas the Individual Pure Tone Sweep Test detected only 38.5%. The Familiar Sounds Screening Test offers a simple and reliable method of finding hearing loss in the pre-school group.

CONCLUSIONS

From this survey of presently available hearing screening techniques and from the results of the pilot study outlined above, several conclusions can be drawn:

1. For grades three through twelve, several excellent screening techniques are available: The Individual Pure Tone Sweep Check, the Glorig Group Audiometer Test, the Massachusetts Group Test, and the Reger-Newby Group Audiometric Technique.
2. For kindergarten through second grade the Individual Pure Tone Sweep Check is the only pure tone screening

technique which can be counted on to produce reliable results at present.

3. Pre-school children as young as three years old can be expected to cooperate in a well-conducted mass screening survey, to the extent of 95% or more.
4. Significant results can be obtained by screening pre-school children with the Familiar Sounds Screening Test developed at the University of Denver, which proved to be more accurate and easy to administer than the pure tone method. This technique presents the possibility of screening thirty pre-school children per hour.

TABLE I

NUMBER OF THREE-YEAR-OLD CHILDREN SCREENED BY FAMILIAR SOUNDS AND PURE TONE TESTS AND FAILING TO COOPERATE

Total Attendance	Number Tested	Number Failing to Cooperate	Percent Failing to Cooperate
349	331	18	5.1%

TABLE II

COMPARISON OF TESTING RESULTS

Number of Children Tested	331
Number given Pure Tone Threshold Tests	126
FAILURES:	
26	By Pure Tone Thresholds
10	By Pure Tone Screen
25	By Familiar Sound Screen
NORMALS FAILED BY SCREENS:	
8	By Pure Tone Screen
12	By Familiar Sounds Screen

TABLE III

RESULTS OF RE-CHECKS FOLLOWING MEDICAL TREATMENT

Number Treated (By 11-10-55)	Number Showing Improved Hearing	Number Showing Normal Hearing
11	8	3

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ANNUAL MEETING OF THE AMERICAN

SCHOOL HEALTH ASSOCIATION

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NOVEMBER 12-16, 1956

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IOWA FIGHTS TOOTH DECAY THROUGH EDUCATION

ELVIRA L. GRABOW, B.S.,
Nurse-Consultant, Bureau of Dental Hygiene

Sponsored jointly by
Iowa State Department of Health
State University of Iowa

No phase of the school health program causes nurses greater concern than that of dental health. As one nurse stated, . . . "It is the most frustrating part of my work. There is so little one can do about it for dental needs are present all the time." While this is true to some extent, today we can do something about the problem and it does not seem as large as it did even ten years ago. To those of us who have been in public health work a long time, ten years seems a short time to measure results in any health program.

With the recent scientific discoveries to reduce tooth decay approximately 40 - 60%, there is no cause for a defeatist attitude. Reference here of course, is to the topical application of sodium fluoride to the teeth of children and the fluoridation of public water supplies if needed.

In Iowa, we have been fortunate to have had leaders in the dental profession and in the educational field who recognized the dental needs of children and wanted to solve them. The program of dental health education dates back to 1927 so that the state has had its benefit for a long period of time. Because of this, Iowa may be considered a pioneer in the field of dental health education. Our readers may also be interested to learn that our present program is the direct outcome of the Sheppard-Towner Act of 1922. It is one of the programs which did not die but has been in continuous operation since that time. The Bureau of Dental Hygiene was organized in 1927 and has continued the work in the public and parochial schools of the state. The Bureau is sponsored jointly by the Iowa State Department of Health and the State University of Iowa.

Another factor which has contributed to the success and continuity of the dental health program is the vital part which the Iowa State Dental Society has played in its promotion from the very beginning. The direction of the program, under the guidance of the State Dental Director, is approved by the dental health committee of the State Dental Society. Significant, too, is the endorsement of the State Department of Public Instruction, the Iowa Parent-Teacher Congress, and other state organizations.

This brief summary will serve as a background for our program as it functons today through the Iowa Plan for Dental Health Education. The Iowa Plan is an organized plan to promote better teeth for Iowa school children. A school is considered active in the Iowa Dental Plan if the dental cards and classroom records are used and if dental health is taught in the classroom. The Plan is based on the principles of education, prevention and correction.

Leaders recognized at an early day that much of the educational material pertaining to dental health used at that time was not educationally sound or authentic from the scientific point of view. So the first steep was to correct this situation. Lesson plans were prepared and made available to the teaching profession. Ultimately a handbook for the teacher in the elementary grades was developed and revised from time to time. A new edition* has been published and is available from the Bureau of Dental Hygiene, College of Dentistry, Iowa City, Iowa.

The handbook has been prepared by a teacher with a doctor's degree in education and with many years of experience in elementary school teaching. Her work was supervised by the former head of elementary school education at the State University of Iowa. The dental aspect of the subject matter was reviewed and approved by some of the dentists on the staff of the College of Dentistry. Thus, the handbook represents the joint effort of the teaching and dental profession and should be of interest to all nurses and teachers engaged in health teaching.

Prevention is stressed through nutrition, good oral hygiene and periodic visits to the dentist. The basic seven diet serves as the guide from the nutritive point of view, including a reduction of concentrated sweets. Much stress is placed on the latter.

Formerly emphasis was placed upon brushing the teeth twice a day; today we teach that the teeth should be brushed immediately after each meal. At lunch time when this may be impossible, rinsing the mouth with water is suggested as a substitute. However, the rinsing of the mouth should not take the place of the usual brushing.

Regular, periodic visits to the dentist are encouraged through the use of dental cards. These cards serve a number of purposes, such as pupil motivation, parental instruction, an annual or semi-annual reminder for the dental examination, and as a record for the teacher. The dental card system has worked very well in our

* The cost of the handbook is 75c plus postage.

state as we have had a 55% return on a state-wide average the past four years. While this may not seem a good record to some people, an authority in the field of dental health education has stated that if the dental card system has been used over a long period of years and been reasonably successful, an additional 13% may be added so that a 68% return may be estimated. The added percent would represent children who had dental cards but lost the card and similar situatons. We are concerned with the remaining 32% who are not receiving care. Efforts are made to reach them. The methods used will be discussed later. Although we do not stress a 100 percent goal in the return of dental cards, many schools do reach it. Emphasis is placed upon improving the record of the previous year. The precentage return is one of the measuring rods used to measure the success of the program.

In order that the program may operate effectively, the various individuals involved in its promotion are contacted as often as possible. These individuals are the dentists, the school administrators, the nurses, school and county (if fortunate enough to have one), the hygienists, the teachers, and the lay public. The dental hygienists have not played an important part in the program up to the present time, because there are so few in the state. These few have been employed by the dentists in private practice with the exception of five who are employed in the Des Moines public schools. Since the department for the training of dental hygienists was opened at the State University of Iowa in 1953, more will become available in the future.

The cooperation of the dentist is more or less taken for granted, as the program is approved by the State Dental Society. Since the local dentist is the one who makes the program click, his advice and guidance is sought when the local program is planned. The county dental health committeeman may serve in this capacity also.

The Bureau of Dental Hygiene contacts the superintendents through correspondence three times a year and through personal interviews by a Bureau representative, when possible, or the local nurse may contact him.

The superintendent is perhaps the most important of all, for the responsibility of "what goes on in the school is his," so that his approval and guidance is the first requisite. It is he who provides the necessary supplies, such as the dental cards, the classroom records, and the handbooks. He encourages the teachers to include

dental health instruction in the general health program. Much of the success in the state-wide program may be attributed to the school superintendents, for they have filled the many gaps in health personnel through the years.

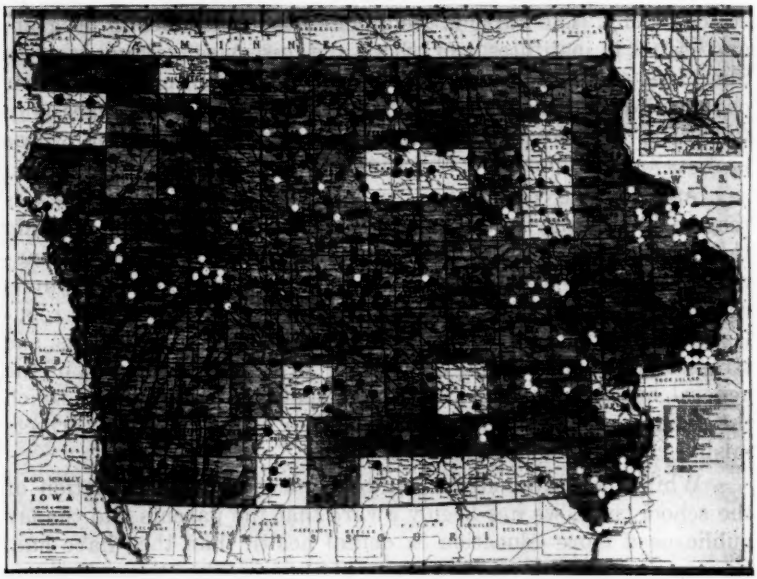
The public health nurses, working in school and rural public health, have played a very important part in the state-wide program. Unfortunately there are many areas that have no public health nursing services. The nurse's part in the program will be stated briefly. The nurse is the guide in the dental health program and assists in institutes, workshops and in-service training courses. She gives talks to Parent-Teacher Associations and many other organizations in the community. One of her important roles is in follow-up, to help provide dental care for those children whose parents are not financially able to take care of this need.

And now we come to the teacher, who, in the final analysis, is responsible for the failure or success of the program. She not only teaches the dental health facts, but presents them in such a manner that the pupils are led to favorable action. She gives the pupils reasons for proper nutrition, for good oral hygiene and for regular, periodic visits to the dentist. In her contact with parents, she stresses dental health and dental care as an important part of the general health program. She supplements the information which the child has brought from school and in many instances corrects misinformation and misinterpretation.

While the major stress has been placed on the education of the school child, we are keenly aware that the parents and the lay public need more education in dental health than they have had. Efforts are made to reach the parent through the Parent-Teacher Association and other groups. Through the interests of these groups, dental care for the school child as well as the pre-school child has made considerable progress in recent years. As an example, in one of our schools, 70% of the kindergarten pupils were examined by the family dentist and received the necessary dental care before coming to school in the fall. This is only one of many such programs.

As many different groups as possible are reached each year. Various media are used, such as the exhibits at the State Education Meeting and the State Fair, the observance of National Children's Dental Health Week, magazine articles in the press, talks, and the use of films, slides, literature, posters, bulletins and television. Every year shows some progress.

Perhaps the factor that has contributed most to the success of the program is its continuity, for there has been no lapse in the twenty-eight years of its existence. As a result, a stable program has been effected. The map below shows the participation in the program for the past year. Rural schools also use the dental cards and are represented by gray dots. (The original map shows them in color.)



SCHOOL DENTAL HEALTH PROGRAMS.

The provision of dental care for the children of dentally indigent families, as well as for other children, is a real problem. As of March, 1954, our ratio of dentists to the civilian population was 1:1925. The matter of dentist distribution enters into the picture too; the larger cities are fairly well supplied, but many of the rural areas are not. Most of the dental care in connection with the dental health program is given by the private dentist. The Children's Department in the College of Dentistry, State University of Iowa, gives care to a considerable number. There is also a Community Chest-supported clinic in the largest city. Five large schools have dentists; four give dental treatments, while the other directs and supervises the program.

While many organizations in various communities have provided dental care for a considerable number of children, the need has not been entirely met. These limited financial resources do serve as a nucleus which may be expanded, or serve as a foundation on which future programs may be based. Encouragement has been given to the creation of revolving funds. Such a fund is one in which organizations may pool their resources, thus creating a larger fund. From this fund parents may borrow money to pay for dental care at no interest, with the provision that the loan will be repaid as soon as possible. However, the plan has not worked very satisfactorily. One nurse reported, "We have a revolving fund but it doesn't revolve." She indicated that the loan was seldom repaid.

The reader may be interested in learning how some of the Iowa localities have worked out their dental care programs. In one school in a city with a population of 7700, such a program has been in operation for years through an actively interested school nurse. Funds are received from the Salvation Army, Rotary Club, other service organizations and an anonymous individual who contributed as much as $1,000 in one year for health needs. For the past nine years, an average of 42 children a year received dental care which was financed through the agencies listed above.

Perhaps our most successful program for the dental care of the underprivileged is that sponsored for the past eight years by the King's Daughters in a town of 11,000. One hundred forty children were assisted in the school year of 1953-54, at a cost of $1200 to the organization. At the end of the year the members felt that the project was too costly and wanted to discontinue it. Through the interest of the school nurse, who happened to be a member of the organization, the (incremental) dental care program was outlined and explained to them. Such a program would be more beneficial from the standpoint of a long-range program and the yearly cost would not be as great. This plan appealed to the ladies and they have agreed to carry on through this method. Since some of our readers may not be familiar with this plan, a word of explanation is necessary. It is a plan long recommended by leading authorities in the field of Preventive Dentistry as the most effective method of meeting the dental needs of children. While it has not received wide acceptance, it has great possibilities. The plan works in this manner: The first year, dental care is provided for all kindergarten children, with subsequent maintenance each year. The

second year, kindergarten children and first grade are included, and so on, a grade being added each year. The follow-up each year should be such that all children whose parents are economically able would receive care from the family dentist and adequate provision through some organization would be made for the others. Theoretically the school should be caries free in nine years.

The following outline may clarify the procedure. All children would receive dental care in the grades and years specified.

SCHOOL

Year	*1st Year*	*2nd Year*	*3rd Year*	*4th Year*
Grade	Kg.	Kg., 1	Kg., 1,2	Kg., 1,2,3
	5th year		*6th Year*	
Grade	Kg., 1,2,3,4		Kg., 1,2,3,4,5	
	7th Year		*8th Year*	
Grade	Kg., 1,2,3,4,5,6		Kg., 1,2,3,4,5,6,7	
	9th Year			
Grade	Kg., 1,2,3,4,5,6,7,8			

If the system were adhered to rigidly, dental care would be made possible for all children. In addition to the school dental health education program, we have suggested the above dental care program for all schools. A few of our schools are trying it, but the acceptance has not been as great as we should like. We shall continue to stress it.

Many of you may have had the experience of sending in a report to some organization or official year after year, and then hearing no more about it. It is our belief that reciprocal sharing is necessary if an effective relationship is to exist between those give and those who receive the report. Evaluation of projects is also necessary if the interest is to be maintained. To accomplish these ends, a bulletin is sent each fall, as early in September as possible to the dentists, the superintendents of schools, the public health nurses, the hygienists, and the officers of many organizations. The value of this procedure cannot be over emphasized. While it is time-consuming, it pays real dividends in the future participation in the program. The bulletin describes new developments in the dental health field, outlines the procedure for a school to follow to become active in the Iowa Dental Plan and contains a report from each individual school indicating the percentage return in dental cards. The report also serves in the evaluation of results.

Another measuring rod which we have used in the past was the examination of 25,279 high school students in twenty Iowa counties between 1942-1950. These examinations were made by a dentist with mouth mirror and explorer point. The findings were as follows: The average decayed, missing and filled tooth rate for these students between the ages of 11 and 19 years was 5.12 permanent teeth. The decayed, missing and filled rate showed that 1.19 permanent teeth were decayed, 0.55 of the permanent teeth had been lost and 3.47 permanent teeth had been filled. We believe this last figure showed that the dental health program was effective and producing results; that is, students were going to the dentist and receiving care.

The purpose of this article has been to give you a picture of the state-wide program in dental health education in the State of Iowa. The fluoridation of the public water supplies and the topical application of sodium fluoride have been omitted from this discussion, although progress has been made in both measures.

SUMMARY

1. A well-defined plan was initiated by leaders in the dental profession in Iowa in cooperation with authorities in the educational field.

2. The State Dental Society has actively supported the program through the years.

3. A stable program has been effected because of its continuity and few changes in guidance and leadership.

4. The program is an example of what may be accomplished when school superintendents, teachers, nurses, hygienists, dentists and parents work together for the good of children.

5. Examples of dental care programs have been cited, and the constructive dental care program has been outlined.

6. The results of the program have been measured by two methods: the percentage return in dental cards and the oral examination of the high school students.

7. The reciprocal sharing of reports is a part of the program.

8. With an excellent foundation, future progress is possible, not only in the educational field, but also in the corrective and preventive areas as well.

REPORT OF COMMITTEE ON TUBERCULOSIS AMERICAN SCHOOL HEALTH ASSOCIATION

Presented before Second Council Meeting, November 14, 1955, Kansas City, Missouri.

The Committee on Tuberculosis continued to promote the certification of schools with reference to tuberculosis control work in progress as its main project.

A program emphasizing the importance of the tuberculin test and other indicated procedures among school children and personnel was prepared and presented during the meeting of the National Tuberculosis Association in Milwaukee in May. This appeared in the preliminary and the final program of the National Tuberculosis Association. Our meeting was held on Sunday evening, May 22, at the Schroeder Hotel. The room was filled to capacity, and we were told that approximately 100 people were turned away. The following program was presented:

"Changing Concepts of the Usefulness of Skin Testing in School Surveys" by Michael L. Furcolow, M.D., Kansas City, Kansas.

"The Tuberculin Testing Program of the St. Louis Academy of General Practice" by Walter C. Gray, M.D., St. Louis, Missouri.

"The Tuberculosis Association and School Certification" by James A. Swomley, Bismarck, North Dakota.

"The Achilles Heel of Tuberculosis Control" by James J. Waring, M.D., Denver, Colorado.

Each of these papers was enthusiastically received, and the audience requested that they be published so reprints would be available. Dr. Furcolow did not have a manuscript, and Dr. Walter C. Gray had so recently published papers in *Journal-Lancet* and the *Journal of the American Medical Association* covering essentially the same material that he was not asked for another manuscript.

Through the kindness of Dr. Marie A. Hinrichs, Editor of the *Journal of School Health* and her Editorial Board, the paper by Dr. James J. Waring entitled, "The Achilles Heel of Tuberculosis Control," was published in the *Journal of School Health* in September. This was such a popular and valuable paper that the journal, *Diseases of the Chest*, international in scope, requested permission to republish it.

The paper by James A. Swomley was an excellent presentation, showing how completely he had organized the work in North Dakota for the certification project. This fine paper was published in the October issue of the *Journal of School Health*.

In arranging these programs which are presented annually, an attempt is always made to have a past president of the National Tuberculosis Association and an executive secretary of a state tuberculosis and health association speak. Two other persons with special interest and records of accomplishment also read papers.

A program has already been prepared to be presented in New York City next spring at the time of the meeting of the National Tuberculosis Association. Mr. Archibald W. Dalton, Annual Meeting coordinator, kindly makes arrangements for time, place and everything else necessary for our meetings. He announces them in the preliminary and final programs of the National Tuberculosis Association. Our organization is deeply indebted to him for this fine work.

The certification of schools project advanced with remarkable rapidity this year. Our committee has a subcommittee of physicians in each state or large city where the project has been adopted, as follows:

ILLINOIS: J. A. Stocker, M.D., chairman, St. Johns's Sanatorium, Springfield
George C. Turner, M.D., Oak Forest
Marie A. Hinrichs, M.D., Chicago

IOWA: Abraham Gelperin, M.D., chairman, Des Moines Polk County Health Deparment, Des Moines
R. E. Smiley, M.D., Mason City
R. B. Widmer, M.D., Winfield
Charles W. Gray, M.D., Ottumwa

MINNESOTA: E. A. Meyerding, M.D., chairman, 614 Portland Avenue, St. Paul
L. S. Jordan, M.D., Granite Falls
S. A. Slater, M.D., Worthington

MISSOURI: Florence E. MacInnis, M.D., chairman, 618 Professional Building, Kansas City
E. A. Belden, M.D., Jefferson City
Walter C. Gray, M.D., St. Louis

ST. LOUIS: Walter C. Gray, M.D., chairman, 8938 St. Charles Road, St. Louis
Wilbur A. Mullarky, M.D., St. Louis
Norman Mistachkin, M.D., St. Louis

NORTH DAKOTA: Percy L. Owens, M.D., chairman, Bismarck Department of Health, Bismarck
Ellis Oster, M.D., Ellendale
J. H. Clark, M.D., Minot

SOUTH DAKOTA: R. G. Mayer, M.D., chairman, 22½ S .Main, Aberdeen
C. L. Behrens, M.D., Rapid City
H. Russell Brown, M.D., Watertown
Roscoe Dean, M.D., Wessington Springs
N. E. Wessman, M.D., Sioux Falls

WYOMING: Walter R. Wynne, M.D., chairman, Wyoming National Bank Building, Casper
G. M. Harrison, M.D., Rock Springs
Loran Morgan, M.D., Torrington

The membership of these committees is chosen by the state or large city tuberculosis and health association, the local Trudeau Society and, in some instances, other especially interested persons and organizations. Committee members are appointed on the basis of their interest in tuberculosis control in schools and their willingness to actually devote time and effort to the project. From the beginning, the subcommittee members are advised to work closely with their tuberculosis and health associations, since this is a joint activity.

The certification now issued to the schools which qualify are signed by the president and executive secretary of the American School Health Association, the executive secretary of the state or large city tuberculosis and health association, and the chairman of the subcommittee of the American School Health Association. These certificates are usually framed and displayed on the walls of the schools receiving them.

Qualifications for certificates are as follows:

Class "A" Certificate

1. Nintey-five to 100 percent of the children must be tested at *least every other year* with tuberculin of adequate dosage (1.0 milligram of old tuberculin or 0.005 milligrams of purified protein derivative for those not reacting to smaller doses) with the following subsequent procedures:

   a. Children of grade school age who react to tuberculin need no other phase of the examination unless symptoms or history are considered of sufficient importance. An x-ray film of the tuberculin reactors is always valuable, and if facilities are available, this procedure is advisable. Otherwise, the x-ray films of children below the age of 12 can be omitted. However, their family physicians and the local health department should be notified in order that the source of their infection may be sought among their adult associates.

   b. All tuberculin reactors shall have x-ray film inspection of the chest during the freshman and senior years of high school, and whenever a shadow is found, complete medical examination shall be made to determine the etiology of the lesions causing it.

   c. All nonreactors to tuberculin from kindergarten through high school shall be retested at least every two years and preferably every year. Those who become reactors since the last testing shall be dealt with in the same manner as those who reacted to the first test.

2. All members of personnel of a school or system to be certified shall have the tuberculin test administered with the same dosage as for children. This includes teachers, engineers, cooks, bus drivers and all others employed by the schools.

   a. All nonreactors shall be retested every two years.

   b. All reactors on first or subsequent testing shall have x-ray film inspection of the chest. Whenever a shadow is found, the examination shall

be completed to determine whether the lesion casting it is tuberculosis and, if so, whether it is of present clinical significance.

c. All recactors, regardless of x-ray findings in the chest, shall be examined with reference to tuberculous lesions in other parts of the body which might be discharging tubercle bacilli.

3. All students and members of personnel who are found to have progressive tuberculosis in any part of the body, that is in the contagious stage or threatening to become so in the near future, shall be removed from school until adequate treatment has been administered and the danger of contagion is remote.

Class "B" Certificate

Same as for Class "A", but when only 80 to 95 percent of the children from kindergarten through high school are tested with tuberculin.

Reports from each of the states and St. Louis through the end of the school year, 1954-1955, contain the following information and statements:

Illinois: Some schools were certified in Madison County beginning in 1951. Mr. E. J. Gross, consultant in program development, Illinois Tuberculosis Association, is in charge of the certification of schools project, along with the state subcommittee. He said, "After starting our intensive program for certification of high schools in Illinois last spring, we were able to send signed certificates to some 67 schools . . . I feel that the program is taking hold very nicely, and I look for much progress in the future . . . Our present plans for the American School Health award are shaping up now and will be launched very soon. If at all possible, I intend to put out a brochure similar to the one presented by Jim Swomley from North Dakota. Dr. Stocker has been very cooperative and interested in this program in Illinois, and I assure you that we intend to go forward."

Iowa: Mr. Paul Williamson, executive director, Iowa Tuberculosis and Health Association, stated that 140 schools had received certification, and another 70 were qualified at the end of the year and were to receive certificates this fall. "The program is being announced state-wide this fall, and I can assure you if we are greeted with the same enthusiasm which developed in several counties this spring, the school certification program will really roll." Mr. Williamson and the subcommittee of physicians issued a brochure entitled, "The Iowa School Certification Program for Tuberculosis Control," which contains all the information necessary for workers throughout the state to qualify their schools for

certification. A copy of this pamphlet is attached. He also prepared a sizeable volume of other material which, with the brochure, constitutes a packet on certification of schools. This contains details of procedure, costs and every other item necessary to proceed and complete the project. These packets are available to the workers throughout the state.

Minnesota: Dr. E. A. Meyerding, executive secretary, Minnesota Tuberculosis and Health Association, and also chairman of the subcommittee on tuberculosis of the American School Health Association, who made the original demonstration of certification of schools, stated that to date a total of 2,294 certificates had been issued to schools in Minnesota. The certificate of schools project is in continuous operation in this state.

Missouri: The organization has been accomplished in this state, but certification has not yet started. However, it is expected to be underway in the near future. St. Louis has its own organization. Dr. Walter C. Gray, chairman of the subcommittee for that city, stated that, by the end of the 1955 fall session of school, the St. Louis Academy of General Practice, of which he is chairman of the Committee on Tuberculosis, will have tested with tuberculin and done the necessary follow-up work on 100,000 children. His group produced a motion picture in color, including the entire procedure of tuberculin testing in schools. This program has attracted international attention. He stated that plans are underway for certifying schools fairly promptly.

North Dakota: James A. Swomley, executive director, North Dakota Tuberculosis and Health Association, together with the state subcommittee of the American School Health Association, from the beginning have kept the certification of schools project before the entire state by publishing items in "Christmas Seal Notes." Moreover, a special brochure entitled, "North Dakota's School Certification Program for Tuberculosis Control," containing the reasons for the certification project, qualifications for certification and other important information was prepared and printed. This was distributed throughout the state. This is the first pamphlet of its kind to be printed in our nation-wide certification project. A copy is attached.

Mr. Swomley built a school certification exhibit, consisting of three wooden panels hinged together. The exhibit's overall width is approximately nine feet, and its height about six feet. This is to be used at teachers' conventions and similar gatherings, and

was exhibited at the Mississippi Valley Conference on Tuberculosis in Des Moines in October. We are hopeful that it will also be exhibited at the meeting of the National Tuberculosis Association in New York City next spring.

At the annual meeting of the North Dakota Tuberculosis Health Association, April 1955, the program included a panel discussion on North Dakota's school certification program for tuberculosis control. In his report, Mr. Swomley stated that, as of July 1, 1955, 340 North Dakota schools were certified, and a total of 23,089 students and 1,547 personnel members were tested. "The success of the program during its test year was the result of the efforts of not only the American School Health Association's North Dakota Committee on Tuberculosis, but also of many other agencies and individuals, including public health agencies, private physicians, county and city school superintendents, county Christmas Seal committees and the North Dakota Tuberculosis and Health Association."

South Dakota: Dr. R. G. Mayer, Aberdeen, chairman of South Dakota's subcommittee, reported that 48 schools were certified and that 31 others had qualified and would receive certificates this fall. In this county, it was planned to continue the program and complete every school during the present year. This he hoped to extend throughout the state in the near future. A brochure like those produced in Iowa and North Dakota was contemplated for wide distribution throughout South Dakota. South Dakota's subcommittee met with Mr. Marvin Whealy, executive secretary of the South Dakota Tuberculosis and Health Association, for the purpose of preparing this pamphlet. The program of the annual meeting of the South Dakota Tuberculosis and Health Association in April contained a panel discussion on school certification and tuberculin testing. Dr. Mayer's presentation in this panel was published in the *South Dakota Journal of Medicine and Pharmacy*, September, 1955. It contains all the information necessary to proceed and continue with certification of schools and was distributed to all the physicians in South Dakota. Reprints may soon be available.

Wyoming: The certification of schools project in Wyoming was instituted while Mrs. Madelyn Seabright was executive secretary of the Wyoming Tuberculosis and Health Association. Nine schools were certified. On her retirement, Mr. Forest J. Gerard was appointed to the executive secretaryship. He reported on September 6 that until his contemplated programs can be organ-

ized, at least for one year, no attempt will be made to certify schools. "Perhaps in another year Wyoming will again want to enter the school certification program . . . I strongly feel that the tuberculin testing programs have a prominent place in our efforts to eliminate tuberculosis."

Thus, our school certification project is now operating in six states. We are encouraged with the widespread interest as manifested by inquiries the committee received during the year from workers in numerous other states. Following his presentation at the Milwaukee meeting in May, James Swomley, Bismarck, received numerous inquiries about his program. On September 10, he wrote, "In the past few months, we have received letters from as far away as Hawaii and New England asking for copies of our booklet on certification." Dr. Walter Gray, St. Louis, wrote on September 21, "Requests for reprints for the St. Louis Academy of General Practice article published in the *Journal of the American Medical Association,* May 7, continue to come in from all parts of the world. There have also been many requests from various medical organizations throughout this country and Hawaii for the motion picture in color on the tuberculin test. I am hoping to make several copies available to the profession in the near future."

The certification of schools project has proved valuable not only in finding children and personnel who are harboring tubercle bacilli and therefore should be examined immediately and periodically thereafter, but also in many instances leading to sources of infection. In seeking sources of infected children, entire populations of some communities have been examined. Thus, schools are kept free from contagious tuberculosis while the program spreads through their communities. The educational value of such a project is almost fantastic. The project provides an immediate and enduring program for tuberculosis and health associations.

If the council and entire membership of the American School Health Association find it possible to vigorously promote the project while enthusiasm is running so high, there could soon be certificates of this organization displayed on the walls of every school in the United States.

Members of Committee: Lloyd B. Dickey, M.D., California; Herman E. Hilleboe, M.D., New York; Sydney Jacobs, M.D., Louisiana; H. D. Lees, M.D., Philadelphia; Esmond R. Long, M.D., Virginia; J. B. Novak, M.D., Illinois; Howard M. Payne, M.D., Washington, D. C.; W. P. Shepard, M.D., New York; David T. Smith, M.D., North Carolina; John B. Towey, M.D., Michigan; James J. Waring, M.D., Colorado; J. A. Myers, M.D., Minnesota, Chairman.

MENTAL HEALTH IN-SERVICE TRAINING FOR TEACHERS

JENNELLE MOORHEAD, M.S., F.A.P.H.A., F.A.S.H.A.

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In-service training, or on-the-job training for teachers is not new, but in recent years a great deal of attention has been given to the improvement of this kind of training. In the past the major portion of in-service training dealt with subject matter and teaching techniques. Today we are becoming more concerned with the relationships of the teachers; teacher-pupil relationships; teacher-parent relationships; and teacher-community relationships. One cannot consider these relationships without becoming concerned with the mental health aspects of these relationships, hence considerable in-service training in mental health is undertaken by schools in the United States.

What are the purposes of this in-service training in mental health? Obviously more effective teaching is the purpose of all in-service training, but when the emphasis is on mental health there is the additional function of helping a teacher understand himself better, and, gain insight into the meaning of children's behavior.

Pre-service training does not completely prepare the teacher for the complex school situaton however good that training may have been. Even though practice teaching may be a part of this training it does not present all the grim realities of full-time teaching. Much that the beginning teacher has learned has been exciting theory which, when put into practice, may be frustrating. Much of it has been for ideal situations rather than badly over-crowded classrooms. These things combined produce a strong impact on the mental health of the beginning teacher.

In-service training in mental health is particularly needed because the pre-service training of the teacher is lacking in opportunities for working through relationships which appear as important parts of his regular teaching. These have great bearing on his mental health. For example, membership in a school faculty and being a professional person, are relationships that develop after the person begins to teach. Likewise satisfactory relationships with parents and with the community are developed after the teaching career begins. However, the weakest area in pre-

service training is preparation for home-school relationships and public relations in general.

In-service training in mental health is not a service for the beginning teacher only but is for the experienced teacher as well. In recent years a great deal of information has been accumulated on child growth and development and this needs to be related to classroom procedures. This is particularly true in the field of child behavior. We now know far more about what child behavior in the classroom may signify as a measure of mental health than we did a few years ago. All teachers need to keep abreast of the best research in child behavior, child growth and development. The phrase "child centered, not subject centered" needs to be much more than a glib phrase in educational jargon.

In planning and conducting in-service programs there are some points which should be stressed particularly. While these points should be considered in all in-service training they are especially important when this training relates to mental health. (1) Programs should be planned democratically and cooperatively by administrators and teachers. In the past administrators have had a tendency to decide what in-service training should be undertaken and teachers had no choice but to attend. (2) In-service training should grow out of the felt needs of teachers and the planning should be largely in their hands. (3) There should be extensive planning over a period of time that should involve as many people as possible. (4) All members of a school staff should be included, the administrators, supervisors, teachers, nurses, doctors, dentists, custodians, lunchroom workers and bus drivers.

The enthusiasm of teachers for the in-service training will be in direct proportion to the part they have had in planning. If in-service training in mental health is to achieve its purposes it must be based on positive attitudes of the teachers involved. Probably the initial improvement in mental health in a teaching group will come about through common planning.

Many in-service training programs take cognizance of community relationships by including parents; representatives of the P.T.A. are frequently asked to participate. When the program relates to mental health it is extremely important for parents to share current research and educational practice with teachers. By having parents participate in in-service training, mental blocks and barriers may be removed between teachers and parents and the gap between home and school is bridged.

When we think of in-service training in mental health we should not have one set pattern in mind, but should be willing to try varied approaches. The old concept of "Teachers Institute" where teachers "talked at" is a hard concept to change. Many other approaches are possible such as workshops, study-discussion groups, curriculum planning, experimental projects, school visitation, fireside chats, role playing, sociodramas and case-study conferences as well as the more formal courses and lectures. Whatever the method of approach may be, it should grow out of the interests and needs of the teachers involved in the training and the leadership available.

While there are many serious problems related to in-service training, the most critical of these are in the field of mental health. One problem is teacher opposition. Many teachers resent in-service training, because they feel it is an imposition on busy people and that it is implied criticism that they are not already excellent teachers. Unfortunately some feel there is nothing new that could improve teaching and some just don't want to be disturbed and change their teaching patterns. Some newly trained teachers feel that pre-service training is the total answer, while other teachers resist in-service training because they have not worked successfully in groups and fear group experiences. All of these attitudes are mental health problems and these teachers need assistance in improving their human relations if they are to help children develop outgoing personalities. Of course it should be recognized that many teachers have bona fide reasons for lack of enthusiasm because previous experiences with in-service training have been dull and boring.

Another problem appears unless the school administration takes into account the problem of time. The regular day of a teacher is taxing both mentally and physically and if in-service training is added at the end of the day, it may become irksome and cause resentment. Administrators should so plan that in-service training is an integral part of the school program and not thought of as an extra-curricular activity. School systems are meeting this problem in a number of ways. Some schools dismiss school a half day a month to allow time for in-service training. Some states by law allow teachers to be paid for a certain number of days of in-service training during the school year. A few school systems are employing teachers for twelve months and planning the summer period individually with each teacher so that growth of the teacher and the needs of the community are met. Such planning

is justifiable, because school systems are finding it profitable to adopt the attitude that growth in teaching ability makes a valuable contribution to the emotional and intellectual development of children.

Our school systems are awakening to the need for in-service training and particularly the need for teachers to be better prepared in the area of mental health. They recognize that teachers need to be aware of symptoms of poor mental health in children, and need to know, that some classroom procedures develop good mental health and some retard it. Teachers need to develop skills in identifying children who need special help in mental health just as they now identify the physically handicapped child. Basic to all of this, of course, is the mental health of the teacher himself. If this is poor, the children cannot help but be unfavorably influenced.

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ACCEPTANCE REMARKS OF CYRUS H. MAXWELL, M.D., RECIPIENT OF THIS YEAR'S HOWE AWARD

If I deserve any credit or recognition for my work in the school health program, it should be for not interfering with those loyal workers with whom I served in the school health work in Auburn, New York, The Department of Education of New York State, and the U. S. Office of Education—hard working, stimulating individuals, blazing new paths. On behalf of them, I accept this award with deep appreciation of its meaning.

Editor's Note—Truly greatness and modesty together oft make the man.

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(Concluded from Page 76)

chairman of the committee on mental health in classrooms for the American School Health association—as well as a member of the last-named group's governing council.

In 1951, she received the first Delta Kappa Gamma award, as the woman who contributed most to education in Oregon that year.

She is a past president of the Oregon Federation of Women's clubs and of the Salem Women's club. She has served on the governor's committee on juvenile delinquency and has been active in the YWCA and various civic and parent-teacher groups. As program chairman, she is working on plans for the convention of the Oregon Congress of Parents and Teachers in Hygiene in April.

Last year, Mrs. Moorhead took a sabbatical leave to study education in Asia. Her post with the national commission of UNESCO will not require her to move from Oregon.

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HEALTH INSTRUCTION IN THE REQUIRED PHYSICAL EDUCATION PROGRAM

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Health is one of man's most important assets. Although everyone agrees with this truism, almost no one does anything about it. Why is this the case? We ignore some of the simplest rules of healthful living. Many facts essential for complete well-being are not taught in our schools. In some instances when it is impossible to teach healthful living by precept, the health instruction becomes merely "lip service" or memory work. Too often, too few people accept their responsibility for a complete health program. Physical Educators, who should play an important role in health education, sometimes forget that the development and maintenance of organic efficiency has as much potential value to the individual as any other educational objective. Quite often the emphasis is on the development of neuro-muscular skills alone which by-passes some of the most vivid opportunities for establishing permanent habits of healthful living. It is therefore logical and advantageous that physical educators utilize every possible chance for promulgating basic health information and its application.

In my opinion, there is a need and a place for both incidental, or indirect health teaching and direct health teaching in the physical education program. The situation itself will govern the method of teaching. In schools where the physical education staff is responsible for required personal health courses, most of the emphasis should be placed upon incidental health teaching. In schools without a required personal health course, time allocations should be made in the regular schedule when certain basic health facts can be discussed. In all eventualities, the application of health knowledge and the formation of healthful living habits are all-important. There are many opportunities that should be utilized in every physical education program for health instruction. This is true in all phases of a complete health education program.

In the health services an alert instructor should be cognizant of common deviations from the normal among students and should guide them into healthful practices. Weighing, measuring, administering posture examinations, completing personal records, and preparing students for medical examinations should motivate the students and enhance their learning efficiency. In the follow-up

program for the correction of common health deficiencies such as under-nourishment, obesity, postural deviations, orthopedic difficulties,and functional organic deficiencies, ideal learning situations naturally ensue.

In developing and maintaining a healthful environment there are innumerable situations in which patterns of healthful living "can be taught as well as caught". Sanitary facilities, equipment and personal gear, proper lighting and ventilation all need the constant attention of instructor and student. Here again the application of basic health facts "by action" is valuable health training.

A direct approach to health instruction is unquestionably valuable and worthwhile in a broad physical education program. An orientation period of several classes should include varied teaching approaches to fundamental health principles closely related to physical education. A knowledge of health problems, such as relaxation as an antidote to tension, good posture, a balanced diet, the potential of exercise for good and bad, and physiological principles, which have many practical and beneficial applications, should pay dividends to the individual. Physical education's first objective, the development of organic efficiency, can thus be met. In addition what is most important, the maintenance of a high level of physical and organic efficiency will benefit the individual throughout his entire life span.

Physical educators must play a much more prominent role in the development and maintenance of a healthful regimen for each individual, whose health, as one of his major assets, must receive a more important place in our educational scheme. Physical educators cannot afford to shirk their responsibility when the needs and benefits are so great.

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MEETINGS

7th ANNUAL SPRING CONFERENCE, commemorating the 50th Anniversary of the Tuberculosis Institute, March 14, 15, 16, 1956, Hotel Sherman, Chicago.

Names of the thirty men and women working with him on the 1956 National Health Forum Committee have been announced by Theodore G. Klumpp, M.D., Chairman. The conference on chronic illness will be held March 21 and 22, at the Sheraton-Astor Hotel in New York City.

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